

## A FEW NEW HEMIPTERA

BY E. P. VAN DUZEE

The following descriptions represent species in the collection of the California Academy of Sciences that do not seem to have been previously published.

*Peribalus hirtus* Van Duzee, n. sp.

Size and aspect of *tristis* Van Duzee but clothed with short stiff grey hairs, the connexivum but narrowly edged with pale. Length 9 mm.

Female: Head broad as in *tristis* but somewhat shorter, the cheeks not quite meeting before the tylus; antennæ as in *tristis*, segments IV and V subequal, longer and thicker than II and III; rostrum nearly attaining the hind coxæ. Pronotum rugosely punctate, the sides thickened with the adjoining disk depressed; apex of scutellum scarcely narrower than in *tristis*. Whole upper surface irregularly, coarsely, in places almost rugosely, punctate, the punctures being somewhat closer on the disk of the corium. Beneath closely, deeply punctate, the punctures on the venter smaller and confused.

Color about as in *tristis*, testaceous brown, much obscured by the coarse black punctures giving the whole insect a blackish appearance. Tip of scutellum, lateral margins of pronotum and connexivum narrowly pale; tibiæ and tarsi paler or somewhat piceous in places; antennæ pale or fuscous with pale incisures; rostrum pale, piceous at tip. Whole surface clothed with long pale hairs which become shorter on the disk of the corium and venter, the longer hairs as long as the thickness of the hind tibiæ.

Holotype, female, No. 4207, Mus. Calif. Acad. Sci. Ent., taken at Potwisha, Sequoia National Park, at about 4,000 feet elevation, June 20, 1929; paratypes four females taken at the same place from May 20 to June 2, 1929, all by Dr. E. C. Van Dyke, and one female taken by Mr. F. T. Scott at the same place in March, 1936. The shorter head, rougher punctation, thickened sides of pronotum, shorter rostrum and especially the long stiff pale vestiture will at once distinguish this species. This is one of a number of new or interesting Hemiptera taken by Dr. Van Dyke in the Sequoia National Park.

*Arocera elongata* Uhler, MS.

Deep black; head before the eyes, segment I of the antennæ, apex of scutellum, base and apex of elytra, and base of the

abdomen red: Latero-posterior margins of the pronotum deeply excavated. Length 18-20 mm.

Head and pronotum impunctate or nearly so; cheeks obscurely striate; latero-posterior margin of pronotum deeply sinuate. Segment II of antennæ about one-half as long as III; scutellum with sparse fine, nearly obsolete, punctures. Elytra wrinkled and obscurely, minutely punctate, more distinctly so at apex. Rostrum attaining middle of fourth ventral segment.

Color deep black; head, except base of vertex, apex of scutellum, a spot at base and at apex of the elytra, the former including the base of the clavus, basal segment of the rostrum and the venter red. Outer angle of fifth ventral segment, all of the sixth and usually the basal and lateral plates of the female terminalia black. Ventrals II, III, and IV with a black marginal spot, V sometimes with a round median spot and there may be a red marginal spot on the meso- and metapleuræ; antennal I and base of II red.

Merida, Venezuela, one female from the author's collection in the museum of the California Academy of Sciences. This specimen was in a collection purchased by the author from a dealer in Germany about 30 years ago. The Carnegie Museum has one from Chapada, Brazil, and two from Province del Sara, Bolivia. This is apparently the species figured in the July, 1929 number of the National Geographic Magazine, plate V fig. 1, where it is given the name used above, evidently a MS name never published by Dr. Uhler.

An interesting question comes in here. Does the publication of this figure in the National Geographic Magazine establish the species, and if so what is the type of the species and who is its author? Uhler cannot be the authority for the name as he neither described nor figured it. Mr. Franklin L. Fisher apparently selected the specimens for illustration in this article and Mr. E. L. Wisherd photographed them. I cannot learn that either of these men was interested in entomology, at least from a systematic standpoint. As we cannot give Dr. Uhler as authority for the species should we credit it to Mr. Fisher and Mr. Wisherd, or to Mr. Grosvenor as editor of the National Geographic Magazine, who appropriated the funds for the preparation and illustration of the paper, or should the present brief description be used as authority of the species. I know of no other case exactly parallel to this and am sure we would

who has given this matter serious consideration. There might seem to be here an argument in favor of the omission of the name of the authority for systematic names, but frequently the name of the author of a species, especially if followed by the date, will enable the student to turn at once to the description without having to refer to a catalogue.

*Catacanthus eximius* Van Duzee, n. sp.

Allied to *carrenoi* but easily distinguished by having the pronotum entirely of a deep greenish blue except for a small red spot behind the humeri, and different male genital characters. Length 25 mm.

Striæ of cheeks more feeble than in *carrenoi* and the elytra more closely punctate; antennals II and III equal in the male, III longer in the female; apex of scutellum acute as in *carrenoi*. Apical margin of male pygofer subacute, not broadly rounded as in *carrenoi*, the setose lateral plate armed within with a nearly horizontal stout black tooth not found in the allied species, the median triangular plate more deeply notched. Female genital pieces much as in *carrenoi* and similarly marked with black.

Head, antennæ, pronotum except the small post humeral spot, scutellum to near the apex of the frenum, a large discal elytral spot somewhat produced anteriorly on the costa and narrowly attaining, or almost attaining, the inner angle, narrow inner edge of the clavus, basal two-thirds of the membrane, legs, four spots either side the venter, most of the rostrum and the narrow inferior edge of the pronotum, blue-black or somewhat tinged with green; lower surface except as noted, connexivum, apex of scutellum, frenum and a small spot behind the humeri, clear sanguineous; elytra whitish testaceous marked with blue-black as noted; apex of membrane slightly enfumed.

Holotype, male No. 4208, and allotype, female, No. 4209, Mus. Calif. Acad. Sci., Ent., taken on Mindanao, Philippine Islands, the male May 5, at 2050 feet, the female taken before July 17th at 1000 ft., and 14 paratypes taken with the types. Two nymphs taken May 5th have the tergum sanguineous with three large median, and a row of marginal spots blue-black. This evidently is the insect designated as variety *b* of *tricolor* (equals *carrenoi*) by Stal but it is a good species.

*Chariesterus brevipennis* Van Duzee, n. sp.

Castaneous-brown varied with fuscous; antennal III lanceolate; elytra attaining middle of fifth dorsal segment; margin of pronotum coarsely tuberculate. Length 10-11 mm.

Head nearly square; vertex deeply sulcate on median line between anterior angles of the eyes and with a deep preocular pit; antenniferous tubercles produced in an acute black spine; antennal I as long as from anterior angle of eye to base of pronotum, without marginal tubercles; the segmental lengths as 48:35:30:16; III expanded from base, lanceolate, its width about one-fourth its length; IV elongate fusiform, two-thirds as wide as I. Pronotum nearly as long as its humeral width; sides coarsely denticulate, scarcely sinuate, surface granulate posteriorly. Elytra closely punctate, appearing granulate; corium attaining middle of tergal IV, the membrane middle of V. Rostrum scarcely attaining coxæ II, segment I reaching the posterior line of the eyes. Apical spines of the femora minute. Genital segment of male truncate; apical plates of female more obtuse and arcuate exteriorly than in *antennator*.

Color dark castaneous becoming blackish on base of head either side of the median line, on the anterior and lateral margins of the pronotum and slightly so on the area of the callosities, more obscurely on the costa, lateral area of tergum, apical portion of femora, tibiæ, coxæ, trochanters and antennals III and IV; rostrum black; eyes red; membrane deep fuscous; beneath lighter castaneous, the stemmata black.

Holotype, male (No. 4210) and allotype, female (No. 4211) Mus. Calif. Acad. Sci., Ent.) taken on Clarion Island, Mexico, February 27, 1928, by Thomas Craig and presented by him to the Academy.

It may be noted here that in this genus there is a recurrent vein in the wing cell as in genus *Coriomeris*, near which genus it should, perhaps, be placed.

*Darmistus crassicornis* Van Duzee, n. sp.

A little stouter than *subvittatus*; antennæ thicker and, with the legs, heavily setose; cheeks not distinctly passing the tylus. Length 11 mm.

Head as in *subvittatus* except that the cheeks, viewed from the side, do not obviously surpass the tylus; bucculæ elliptical, not longer than high as in *subvittatus*. Rostrum attaining hind margin of middle coxæ. Antennæ about twice as thick as in the

allied species, the segments as 20:40:34:35; I, II and III rather closely set with stiff hairs mostly as long as the thickness of the segment; IV pale pubescent. Pronotum as long as its basal width; collum broad and flat, scarcely distinguished. Scutellum acutely triangular; apex of corium less acute than in *subvittatus*, the posterior angle of the metapleura more produced. Male genital characters about as in *subvittatus*, the median tooth narrower at base and not surpassed by the smaller stiles as in the allied form.

Color as in the allied species; testaceous yellow, coarsely fusco-punctate and clothed with short stiff pale hairs becoming long pale setæ on the antennæ and legs; two obscure vittæ on vertex, four on pronotum, three on scutellum and disk of the corium more or less infuscated; base of head, side of pronotum, tip of scutellum and costa paler; beneath paler yellow; venter infuscated, irrorate or washed with sanguineous; median line from bucculæ to apex of venter, another on the anterior coxæ and sides of the mesosternum, a cloud along the side of the head and propleuræ, and the median line and apical segment of the rostrum black or blackish; middle of hind coxæ with a blackish cloud; legs fusco-punctate at base of spines; middle of venter sparsely pale setose; membrane brown, the veins margined with pale.

Holotype, male (No. 4212) Calif. Acad. Sci., Ent.,) and four male paratypes taken by Mr. C. D. Duncan on the Chisos Mts., Texas, in July, 1921 and two males taken by Mr. Duncan at Sheffield, Pocos Co., Texas, July 24. The stout antennæ and long-setose legs and antennæ will at once distinguish this species.

*Darmistus duncani* Van Duzee, n. sp.

A little larger and darker than *subvittatus* with polished piceous antennæ, clothed with longer and sparser setose hairs. Length 11 mm.

Head as in the related species but with the cheeks not exceeding the tylus. Antennæ slender as in *subvittatus*; segments as 20:35:25:40; I, II and III polished, piceous, with scattering setæ which are about as long as the thickness of II and III; IV brown with pale pubescence and a few longer setæ; legs sparsely long-setose. Beneath pale yellowish, venter and disk of the pleuræ smooth with a few blackish punctures; venter obscurely irrorate with sanguineous with a few black points at base and along the sides; median line of the metasternum and apex and median line of rostrum black; membrane uniformly brown; pale median line of pronotum distinct as in *crassicornis*; median tooth of male genital segment broad, elongate triangular, much exceeding the short stiles.

Holotype, male (No. 4213) and allotype, female (No. 4214), Mus. Calif. Acad. Sci., Ent., taken by Mr. D. K. Duncan at base of Penal Mts., Arizona. This species is nearest to *subvittatus* but may be distinguished by the shorter cheeks, piceous-black and somewhat polished antennæ, the poorly developed median black vitta beneath and the distinct male genital characters. *D. subvittatus* is represented in the Academy collection by material from Colorado, Arizona and southern California.

#### KEY TO OUR SPECIES OF DARMISTUS

1. Antennæ stout, heavily armed with setæ nearly as long as the thickness of the segment; segment I one-half the length of II, one-third as thick as long.....*crassicornis*
- ... Antennæ more slender, less setose, segment I two-thirds the length of II, one-fourth as thick as long.....2
2. Antennæ smooth, piceous, more sparingly beset with longer setæ; segment IV dull castaneous, minutely pubescent, cheeks not exceeding the tylus.....*duncani*
- ... Antennæ paler, brown-punctate, segment I and apex of II and III infuscated; IV pale castaneous, minutely pale pubescent; cheeks more produced, distinctly exceeding the tylus  
.....*subvittatus*

#### *Trapezonotus vandykei* Van Duzee, n. sp.

Aspect of *rufipes* Stal but slightly larger with the pronotum more narrowed anteriorly; black, opaque, with the basal segment of antennæ and the legs in part pale. Length 4 mm.

Head as long as wide between the eyes, coarsely, closely punctate, the punctures becoming subobsolete posteriorly where the surface is dull and opaque; tip of tylus pale. Antennæ stout; segment I passing apex of head by one-third its length; II about twice the length of I, III one-half longer than I, IV a fourth longer than II; I and extreme apex of II and III ochraceous; surface minutely pilose with a few longer setæ. Pronotum anteriorly scarcely wider than head, its surface opaque black, coarsely punctate, the punctures subobsolete across disk of anterior lobe; lateral margins slenderly explanate and pale; posterior lobe usually more or less invaded with ochraceous. Scutellum rather obscurely punctate. Elytra coarsely punctate, obscurely so on disk of corium; clavus with three rows of punctures, the inner more irregular; surface brownish ochraceous, sometimes almost entirely black; membrane abbreviated, black, nervures white. Beneath black, polished on the venter; narrow edge of prosternum, acetabulæ and hind angle of mesopleuræ ochraceous. Rostrum and

legs clearer ochraceous; hind tibiæ and tarsi black, the anterior and intermediate embrowned; anterior femora thickened, armed below with two short teeth and a few minute serrations; anterior tibiæ moderately curved at base, hind tibiæ short-pilose with a row of about six slender spines beneath; tarsal I about as long as II and III together. Rostrum reaching to between the intermediate coxæ, dark ochraceous, becoming black at apex. Upper surface of insect normally clothed with sparse appressed pale hairs.

Holotype, male (No. 4215) and allotype, female (No. 4216), Mus. Calif. Acad. Sci., Ent., taken at Cumbres Pass, Colorado, at 10,000 ft. elevation, July 20, 1935, by Dr. E. C. Van Dyke, and one female taken by Dr. Van Dyke at Longs Peak Inn, Colorado, July 2, 1926, at 9000 ft., all presented to the Academy by the collector. This is a most interesting high mountain form recalling *rufipes* Stal but belonging to the genus *Trapezonotus*.

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#### A PECULIAR STRUCTURE IN A FULGORID

While studying some Hemiptera taken by Mr. Templeton Crocker on the Solomon Islands I found one possessing a structure quite new to me. This insect, a species of *Bennaria* pertaining to the subfamily Cixiinae, has on each side a rod-like appendage articulated to the basal abdominal segment. It is as long as the width of the elytra at that point and at its extremity it is enlarged to a cup shaped container that is filled with a waxy secretion. This structure recalls the halteres found on the metathorax of the Diptera where they replace the hind pair of wings. These rods or balancers occur in two Indo-Australian genera of cixiids, *Benna* and *Bennaria*, but I know of no suggestions having been made relative to their functions. They must serve some useful purpose and an investigation of this would prove most interesting. One other genus of the Fulgoridæ, *Achilixius*, has two processes on either side of the basal abdominal segment but these are much shorter and apparently are not articulated, but they do carry similar cup-shaped depressions. Their functions, however, have not been worked out.—E. P. Van Duzee.